

Appl. No. : 09/890,366
Filed : July 26, 2001

REMARKS

In response to the Office Action mailed May 6, 2005, Applicants respectfully request the Examiner to reconsider the above-captioned application in view of the foregoing amendments and the following comments. As a result of the amendments listed above, Claims 1, 9-14, 17 and 18 remain pending. Claims 1 and 12-14 have been amended. Claims 15 and 16 have been canceled, without prejudice or disclaimer. Claims 2-8 were canceled by a prior amendment. Claims 17-20 have been added.

In the changes made by the current amendment, deletions are shown by ~~striketrough~~ or [[double brackets]], and additions are underlined.

The Rejections Under 35 U.S.C. § 112, Second Paragraph Have Been Traversed

Claims 1 and 9-16 presently stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite. Specifically, the Examiner states that the terms “fused” and “fused aggregates” are indefinite as to their meaning. Applicants respectfully disagree. However, to expedite allowance of the present application, the claims have been amended to eliminate the use of these terms. Applicants submit that the present rejection under 35 U.S.C. § 112, second paragraph is now moot.

Claims 1 and 12 have been amended to recite, in relevant part, that the aggregates “coalesce,” which results in the aggregates becoming fine particles. Support for this claim term is provided at least by the text at page 7, line 26 to page 8, line 1. Applicants respectfully submit that the claim term “coalesce” is entitled to its plain and ordinary meaning, which will be readily understood by one of skill in the art in view of the present disclosure. However, Applicants are amenable to providing additional clarification as to the claim term, if the Examiner so desires.

For at least these reasons, Applicants submit that Claims 1 and 9-16 provide a *reasonable* degree of clarity and particularity and, thus, meet the standard for definiteness (referenced in M.P.E.P. § 2173.02). Reconsideration and withdrawal of the present rejection is respectfully requested.

The Rejections Under 35 U.S.C. § 112, First Paragraph Have Been Traversed

Claim 15 is specifically identified as being rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement. However, Claims 1, 9 and 12 were also mentioned under the same heading in the outstanding Office Action. It is not

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clear to the Applicants whether these claims stand rejected. However, the Examiner's comments have been addressed herein.

With respect to Claim 1, line 8, the Examiner states that no support could be found for the aggregates being fused to reduce a size of the aggregates. Initially, Applicants note that, as discussed above, Claim 1 has been amended to eliminate the use of the term "fuse" and recite that the aggregates coalesce. It is respectfully submitted that support for the relevant portion of Claim 1 can be found at least within the text at page 7, line 26 to page 8, line 1. Applicants believe that the present amendment to Claim 1 overcomes the present rejection.

Further, the Examiner states that no support could be found for the growing of fine particles at Claim 1, line 10. Applicants respectfully disagree. Nonetheless, Claim 1 has been amended to eliminate this recitation and thus render the rejection moot.

In Claim 9, the Examiner states that there is no support for spherical particles caused by fused aggregates. Applicants respectfully disagree. However, as noted above, Claim 1 (from which Claim 9 depends) has been amended to eliminate the recitation of the term "fuse." At page 7, lines 30 and 31, it is described that, in one non-limiting embodiment, the aggregates completely coalesce to be turned into small-sized spherical particles. For at least this reason, Applicants submit that the present rejection is overcome.

With respect to Claim 12, the Examiner states that there is no support for the aggregates colliding with one another. Applicants respectfully disagree. The present disclosure discusses the collision of both particles and aggregates. However, to expedite allowance of the present application, Claim 12 has been canceled, without prejudice or disclaimer. The rejection of Claim 12 is now moot.

Claim 15 was specifically identified as being rejected under 35 U.S.C. § 112, first paragraph. However, the rejection merely referenced Claim 1. Applicants submit that Claim 15 complies with 35 U.S.C. § 112, first paragraph for at least similar reasons to those discussed above in connection with Claim 1.

For at least the reasons presented above, Applicants respectfully submit that Claims 1, 9, 12 and 15 comply with 35 U.S.C. § 112, first paragraph. Accordingly, reconsideration and withdrawal of the present rejection is respectfully requested.

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Claims 1 And 9-16 Are Allowable Over The Prior Art Of Record

Claims 1 and 9-16 presently stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Kamijo reference. Applicants respectfully submit that the claims, as amended herein, are allowable over the Kamijo reference, and the other prior art of record, and thus request reconsideration and allowance of the same.

The Kamijo reference discloses a process by which reactant gases are introduced into an ionized reaction chamber. The reactant gases undergo a reaction with a flame. In addition, the gases are heated by a laser beam.

Initially, Applicants note that the independent claims (Claims 1 and 12) have been amended herein. Claims 1 and 12 now recite, among other recitations, that both 1) a wave length and 2) a power level of at least one laser beam is used so as to cause the aggregates to coalesce into fine particles.

The Kamijo reference does not disclose the coalescence of aggregates, or even aggregates themselves, for that matter. The Examiner admits as much in the outstanding Office Action.

The Kamijo reference discloses the use of a laser to heat the reaction gases. However, besides the disclosure that a CO₂ laser may be used, no other parameters of the laser are disclosed. That is, there is no disclosure regarding the wave length of the laser nor is there any disclosure regarding the adjustment of a power level of the laser, or the effects of the laser, other than igniting the gases therein.

Applying the present rejection based on the Kamijo reference to the claims as amended herein raises at least two issues: 1) Inherency and 2) Optimization through routine experimentation. In the outstanding Office Action, the Examiner touches on the second issue by stating that it would have been obvious to perform routine experimentation to determine the optimal processing parameters, depending on the size of particles desired, in order to arrive at the claimed invention. Applicants respectfully submit that not all of the claim recitations are disclosed, either explicitly or inherently, by the applied reference. Furthermore, Applicants respectfully disagree that the claimed invention would be the obvious result of routine experimentation based on the Kamijo reference.

Inherency

To establish a prima facie case of obviousness, every limitation must be taught or suggested by the prior art. See M.P.E.P. § 2143. As noted above, the Kamijo reference does not

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teach the selection of either a power level or a wave length of the laser to achieve the effects recited in the claims and, thus, clearly does not teach both, as recited by the claims. To maintain a rejection based on the Kamijo reference, it must be shown that the selection of both the power level and the wave length of the laser sufficient to achieve the recited results is inherently disclosed or is suggested by the Kamijo reference.

To support a finding of inherency, the Examiner must provide rationale or evidence that the missing descriptive matter is *necessarily* present in the system described by the reference, not just that it may be present. No rationale is discernable from the Kamijo reference, itself, that the disclosed system necessarily involves the selection of either a power level of the laser or a wave length of the laser.

For instance, the reference discloses the possibility of adjusting the flow rate of the reaction gases, the activation or not of the ionization mechanism and the absence or not of the laser. However, no adjustment of any parameter of the laser is contemplated. This conclusion is bolstered by the recited Example 3, which is summarized in Table 2. The reaction gases were varied and both the ionization and laser were present or not, there was no adjustment mentioned for either the ionization mechanism or the laser.

Routine Experimentation

For the sake of argument, even if adjustment of both the power level and wave length of the laser were inherent in the Kamijo reference, the claimed invention would still be patentable over the reference because the Kamijo reference does not teach or suggest that the wave length and power level of the laser are selected so that the aggregates coalesce into fine particles. In the outstanding Office Action, the Examiner states that it would be a matter of routine experimentation to arrive at the claimed invention in view of the Kamijo reference. Applicants respectfully disagree.

In order for the optimization of a particular variable to be a matter of routine experimentation, that variable must be recognized as a result-effective variable. See M.P.E.P. § 2144.05(II)(B). That is, to maintain the rejection based on the Kamijo reference, it must be shown that both the power level and wave length of the laser are recognized as parameters that effect the coalescence of aggregates in the system.

The Kamijo reference does not recognize the concepts of aggregates or coalescence and, therefore, clearly cannot provide a basis for concluding that these parameters are recognized as

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result-effective variables. Accordingly, for at least the reasons presented above, the rejection based on the Kamijo reference cannot be maintained.

Claims 9-11, 13 and 14 depend from one of allowable Claim 1 or Claim 12. These claims are allowable, not only because they depend from an allowable claim, but upon their own merit as well. For example, Claim 11 further recites the step of controlling a phase of the fine particles by controlling a power of the laser beam. This step is not disclosed or suggested in the Kamijo reference or other prior art of record. As noted above, Kamijo merely discloses the presence or absence of the laser beam. Accordingly, this rejection cannot be maintained. For at least the reasons presented above, Applicants respectfully submit that Claims 1 and 9-14 are allowable over the prior art of record and request reconsideration and allowance of the same.

New Claims 17-20 Have Been Added

New Claims 17-20 have been added. These claims are fully supported by the application as filed. Specifically, support for new Claims 17-20 can be found at least by the text at page 8, lines 5-14. These claims depend from one of allowable Claims 11 or 12 and are also allowable on their own merit as well. Consideration and allowance of new Claims 17-20 is respectfully requested.

CONCLUSION

For the foregoing reasons, it is respectfully submitted that the rejections set forth in the outstanding Office Action are inapplicable to the present claims and specification. Accordingly, early issuance of a Notice of Allowance is most earnestly solicited.

The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the claims in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call Applicant's attorney, Michael A. Guiliana at (949) 721-6384 (direct line), to resolve such issue promptly.

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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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